REMARKS/ARGUMENTS

Status of the claims

Claims 5, 20, 25-31 remain pending and are not presently amended.

Claims 5, 20, 25-31 remain rejected under 35 U.S.C. 112, first paragraph, because allegedly the specification, while being enabling for a method for reducing viral infection and replication of the Murid herpesvirus 68 (MHV68) in a cell in vitro and in vivo, does not reasonably provide enablement for a method for inhibiting viral infection and viral replication in a cell in vitro or in vivo or a method of inhibiting a viral infection in a human.

Response to the rejection under 35 U.S.C. §112, first paragraph, for wont of enablement.

This rejection was predicated upon an alleged unpredictability in the relevant art. To support this contention, the Office Action principally cited Matusmoto et al. as disclosing that the viral susceptibility of mice deficient in TLR3 was often unaffected by their loss of TLR3. This finding is not surprising, TLR3 is but one of several receptors of this family of receptors which respond to viral pathogens. For instance, TLR7, TLR8, and TLR9 have been implicated in anti-viral responses (*see,* Jurk et al., *Nature Immunology* (2002) (filed with IDS of March 5, 2008; and Gill et al., *J. of Virology* 80(20):9943-50 (2006), enclosed with SIDS filed this date). Thus, alternative mechanisms for inducing the innate immune response likely account for the findings relied upon by the Examiner. Thus, the cited evidence is indirect and not at all a reliable predictor of the variability of the effect of polyI:C on viral infections and replication *in vivo* or *in vitro*.

Indeed, *direct* evidence shows the claimed subject matter is broadly enabled as it is being *broadly* practiced *right now* without any undue experimentation. Subsequent to the Applicants' teachings, a great deal of corroboratory art has been published which evidences that the claimed method does work across a wide spectrum of both subjects and viral species. Julander et al. have shown that pretreatment with Ampligen®, also known as poly I:poly C12U, a poly(I:C)-like molecule which acts on TLR3, protects hamsters against western equine encephalitis virus *in vivo* (*see,* enclosed with IDS, Julander et al., *Virology* 360(2):454-60 (2007).

Herbst-Kralovetz et al. and Gill et al. have respectively shown that pretreatment with poly(I:C) protects against herpes simplex virus type 2 *in vivo* in mice. (*see,* Gill et al., *J. of Virology* 80(20):9943-50 (2006) and Herbst-Kralovetz MM, et al., *J Virol.* 80(20):9988-97 (2006), both enclosed with SIDS. Nazli et al. have shown that poly (I:C) pretreatment also protects human female primary genital epithelium against herpes simplex virus type 2 infection *in vitro* (*see,* Nazli et al., Abstract, *Antiviral Res.* 81(2):103-12 (2008), enclosed with SIDS). Wong et al. reported that activation of TLR3 using poly(I:C) stabilized with lysine was effective in protecting against any of four strains of influenza in mice *in vivo* (*see,* enclosed with SIDS, Wong et al., Abstract, *Vaccine* 27(25-26):3481 (2009)). Zhao et al. have reported that poly(I:C) treatment protects mice against lethal infection with MA15 virus *in vivo*, a mouse-adapted strain of a SARS conmavirus (*see,* Zhao et al., *PLOS Pathogens* 5(10):1-17 (2009), enclosed with SIDS, at p. 5, right column and thereafter. Dou et al. have shown that poly(I:C) inhibits viral replication in the lungs of human metapneumovirus infected mice *in vivo* (*see,* Dou et al., *Bing Du Xue Bao,* 26(1):1-7 (2010), enclosed with SIDS. Boukhvalova et al. demonstrated the antiviral effect of poly ICLC against influenza virus and Respiratory Syncytial Virus (RSV) in the cotton rat *in vivo* (*see,* Boukhvalova et al. , *Journal of Interferon and Cytokine Res.* 30(4): 229-41 (2010), enclosed with SIDS. Even in such far afield species as fish, poly I:C treatment protects against viral infections *in vivo*: Trout are protected from infectious pancreatic necrosis virus (*see*, Kim et al., Abstract, *Dis. Aquat. Organ.* 83(2):105-13 (2009), enclosed with SIDS); grouper are protected against RGNNV virus (*see,* Nishizawa et al., Abstract, *Dis. Aquat. Organ.* 83(2):115-22 (2009), enclosed with SIDS); and flounder are protected against viral hemorrhagic septicemia (*see,* Takami et al., Abstract, *Dis. Aquat. Organ.* 89(2):109-15 (2010), enclosed with SIDS).

The above publications clearly show the claimed subject matter is presently operable across a broad diversity of species over a diverse collection of viruses and that the claimed invention can be practiced without any undue experimentation. Accordingly, the Applicants respectfully request that the above grounds of rejection be reconsidered and withdrawn.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 925-472-5000.

Respectfully submitted,

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